

CHAPTER 14

Surface areas and Volumes (Cube and Cuboid)

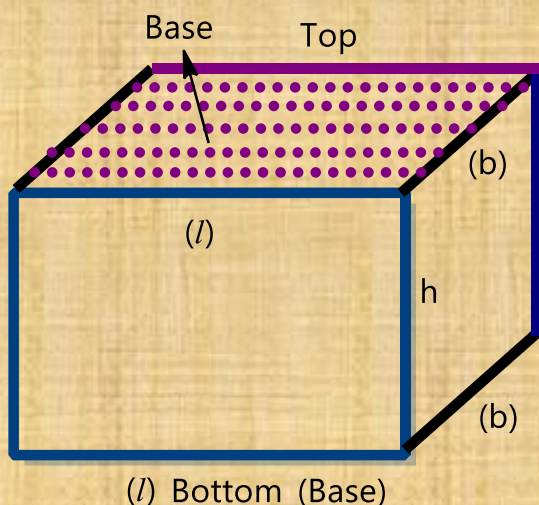
Volume:

The space occupied by a solid body is called its volume. The units of volume are cubic units.

Volume of cuboid:

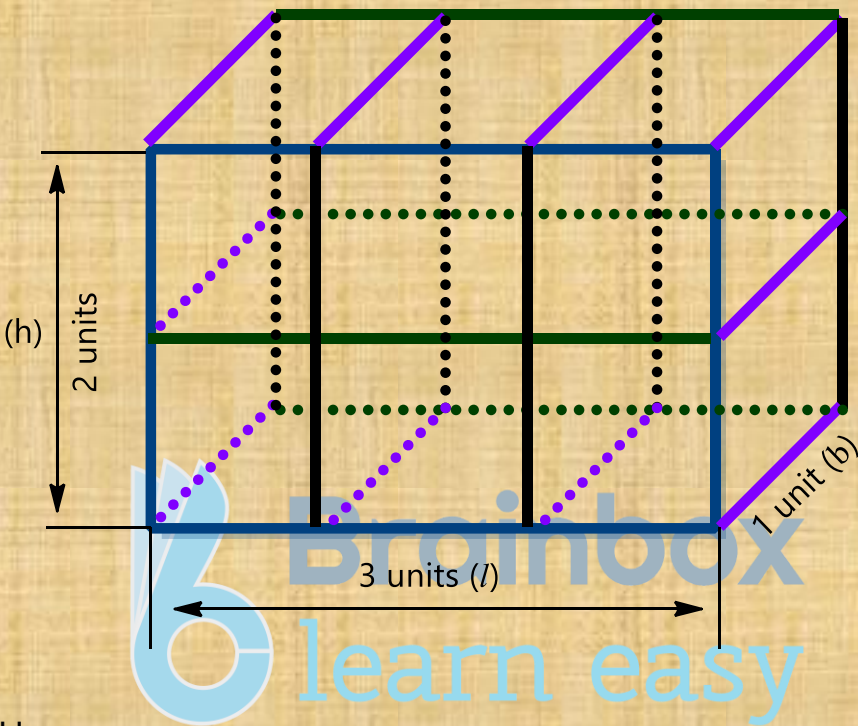
Volume is measured in terms of the number of cubic units of space that a solid occupies. Therefore, the volume of a cuboid is measured by finding out how many unit cubes can fit into the given space.

$$\text{Volume of cuboid} = \text{Area of base} \times \text{Height} = (l \times b) \times h$$



Example:

The solid made up of 6 unit cubes arranged to form a cuboid.



Here,

Length of cuboid (l) = 3 units

Breadth of cuboid (b) = 1 unit

Height of cuboid (h) = 2 units

Volume of the cuboid = Length $\times$ Breadth $\times$ Height

$$V = l \times b \times h$$

$$= 3 \times 1 \times 2$$

$$V = 6 \text{ Cubic units}$$

Note:

- Cuboid, lateral surface is perpendicular to the base.
- Cuboid, cylinder has got top and bottom as base which are congruent and parallel to each other.

